

2007 Forest Health Highlights

Massachusetts



American Elm

January 2008

The Resource

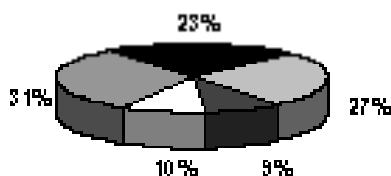
The forest resource of Massachusetts has great demands placed on it. Although Massachusetts is thought of as an urban State, 64 percent of the land area is forested. This forested area is managed for a multitude of purposes, including recreation, water quality, wildlife habitat, and a forest product industry.

•64% of the State is forested
(3,225,000 acres)

Out of the forested area:

- 90.8% timberland
- 9.2% noncommercial or reserved forest land

Major Forest Types:



- white/red pine/American elm (27%)
- oak/pine (9%)
- other (10%)
- oak/American elm (31%)
- northern hardwoods (23%)

Special Issues

The extensive defoliation experienced by the forests of Massachusetts has diminished somewhat this past year, however defoliators again caused the most significant damage in the State. A total of 42,000 acres of defoliation by the **winter moth**, a recently introduced exotic pest, were documented in Plymouth, Barnstable, Norfolk and Essex Counties. A lack of natural enemies continues to allow the spread of this insect. In cooperation with the University of Massachusetts, the release of the parasitic fly *Cyzenis albicans* continues. This parasite has now been released in three locations in the eastern portion of the State.

Plymouth, Bristol, and Norfolk Counties experienced heavy defoliation from the **gypsy moth** over approximately 25,360 acres. In many cases this insect was defoliating the same areas as the forest tent caterpillar. Permanent survey sites indicated populations are declining. In Southeast Massachusetts, where areas have been repeatedly defoliated by both the gypsy moth and forest tent caterpillar, a high percentage of mortality of red oak is being observed. Statewide, 11,500 acres were observed with mortality.

Defoliation from **forest tent caterpillar** was observed on 21,814 acres in areas across Berkshire, Hampden, Hampshire, Franklin, and Bristol Counties. Berkshire County reported a high percentage of parasitism from *Sarcophaga* sp., the "Friendly Fly".

Approximately 12,700 acres of damage from the **maple trumpet skeletonizer** was mapped during an aerial survey for late season defoliators. This defoliation was observed in Berkshire, Franklin, Hampden and Hampshire Counties. A total of 7,400 acres of damage by **fall cankerworm** were mapped in Hampshire and Barnstable Counties. There were also limited areas of hardwood defoliation caused by the **eastern tent caterpillar**, **maple leaf cutter**, and also the **browntail moth** on beach plum on Cape Cod.

Isolated spots of **white pine blister rust** in white pine regeneration continue to be observed, predominantly in southern Berkshire and central Worcester Counties. The known infestations of **red pine scale** in Hampden and Hampshire Counties continue to slowly spread. A new infestation was identified in Barnstable County.

Surveys are being conducted to determine the extent of the infestation of the exotic ambrosia beetle *Xyleborus seriatus*, first

Special Issues cont.

detected as part of the Early Detection Rapid Response survey. This insect was found in Worcester, Middlesex, and Franklin Counties using funnel traps.

The **hemlock woolly adelgid** continues to be a major concern, five new communities were found to be infested this year. The State is monitoring predator release sites, but has been unable to recover this ladybird beetle at 10 of the 11 release sites. The severe cold experienced during 2004 resulted in adelgid mortality in most locations, however, a buildup in the adelgid population has now been observed. The State has made releases of another predator, *Laricobius nigrinus*, in four locations.

Wet conditions in the spring resulted in widespread foliar disease, the most common of which was **anthracnose**. This was most prevalent in Berkshire, Hampden, Hampshire, and Franklin Counties. Damage was noted on approximately 5,500 acres. On Martha's Vineyard 350 acres of red pine have been severely damaged by *Sphaeropsis tip blight* (*Diplodia*). Berkshire and Franklin Counties continue to experience decline and mortality caused by **beech bark disease**, with 1,900 acres of damage mapped during the aerial survey. About 950 acres of **Armillaria root disease** were also documented.

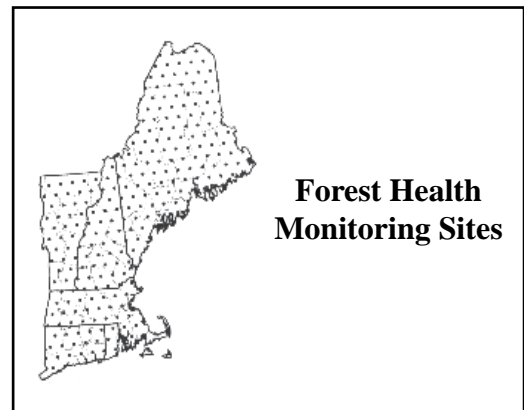
The effects of previous seasons of **drought** continue to be observed, although somewhat less than in previous years. A total of 1,050 acres of damage was documented, mostly on higher elevation sites. Changes in the Massachusetts trapping laws have allowed the beaver population to explode. This has resulted in many streams being dammed causing **flooding**, resulting in 350 acres of dieback and mortality.

Regional Survey

National Forest Health Monitoring Program

In cooperation with the USDA Forest Service, Massachusetts participates in the National Forest Health Monitoring Program. The program's objective is to assess trends in tree condition and forest stressors. All of the New England States have been involved since the program was initiated in 1990. A healthy forest is defined as having the capacity for renewal, for recovery from a wide range of disturbances, and for retention of its ecological resiliency.

The overall health of the forests in New England is good, with various damage agents present at different times and locations. Results from permanent sample sites indicate that there has been minimal change in crown condition in recent years. There are varying impacts from forest fragmentation, drought, fire, insects, and pathogens. The most significant pests are those that have arrived from other parts of the world, such as the gypsy moth, beech bark disease, and hemlock woolly adelgid. A summary report of *Forest Health Monitoring in the Northeastern United States* can be found at <http://fhm.fs.fed.us>.



For More Information



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